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Chapter 4 Seed Files

Seed files

Seed files form the base for most newly created MicroStation design files. Seed files act as a template for a new design file containing information such as, working units, global origin, coordinate readout, etc. Some of the most important attributes are detailed below.

At CFLHD, there are currently 6 seed files in use in the roadway design group and 2 in the bridge section, each with attributes pertaining to a different design case. These seed files should be used to create all new files for CFLHD work. See workflow 1 for help with creating a new MicroStation design file using these seed files.

CFLHD Seed Files	
Name	**Description**
seed2de.dgn	English 2D plan and profile
seed3de.dgn	English 3D plan and profile
seed2dm.dgn	Metric 2D plan and profile
seed3dm.dgn	Metric 3D plan and profile
seedxse.dgn	English cross-section
seedxsm.dgn	Metric cross-section
br_seede.dgn	English Bridge seed file
br_seedm.dgn	Metric Bridge seed file

Table 4.1: Current seed files in use at CFLHD

These seed files are located on the CFLHD network at:

N:\Standards\MicroStation\v7\English\seed\ and

N:\Standards\MicroStation\v7\Metric\seed\

or on the CFLHD web site at the following link:

http://www.cflhd.gov/cadd/standardfiles.cfm

All of the above listed seed files have a Global Origin of 0,0(,-2147483.648 for 3D).

When creating new files, the user must select the appropriate seed file for the type of design file being created. As shown later in this chapter, different seed files have different working units. A file created with the incorrect seed file will not be compatible with design files of the same type.

Workflow 1: Creating A New MicroStation Design File

1. *When starting MicroStation, the first dialog shown is the MicroStation Manager. From MicroStation Manager, select File>New.*

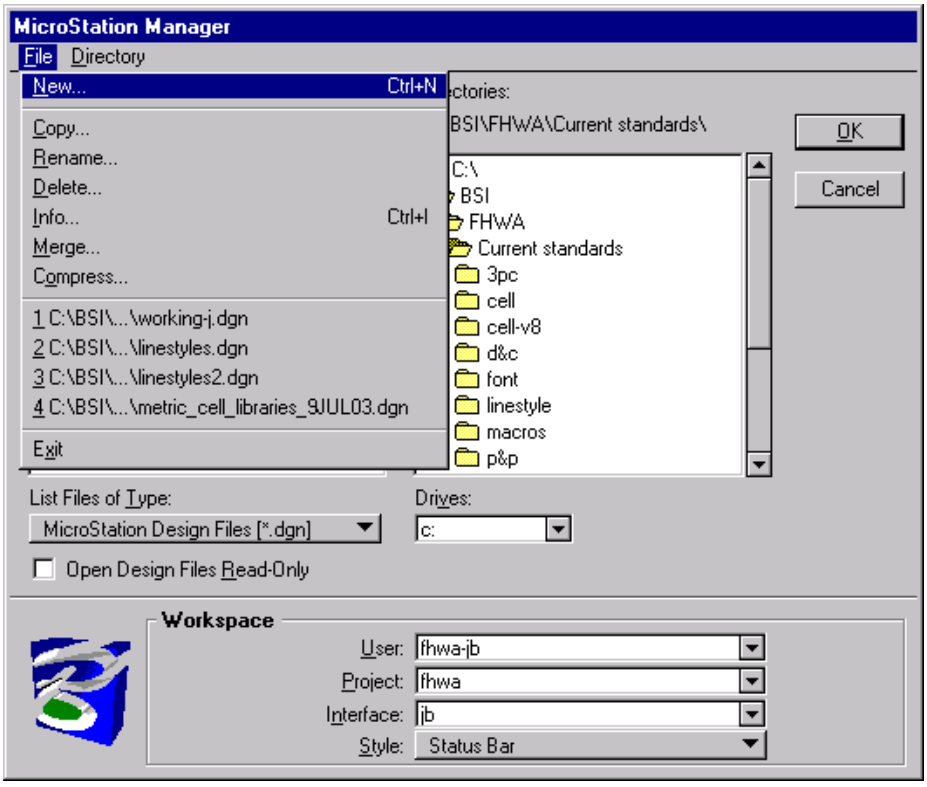

Figure 4-1: Workflow…

2. *The Create Design File dialog will activate. From this dialog the user can give the file a new name, select the directory where the file will reside, and select the appropriate seed file to act as a base for the new design file.*

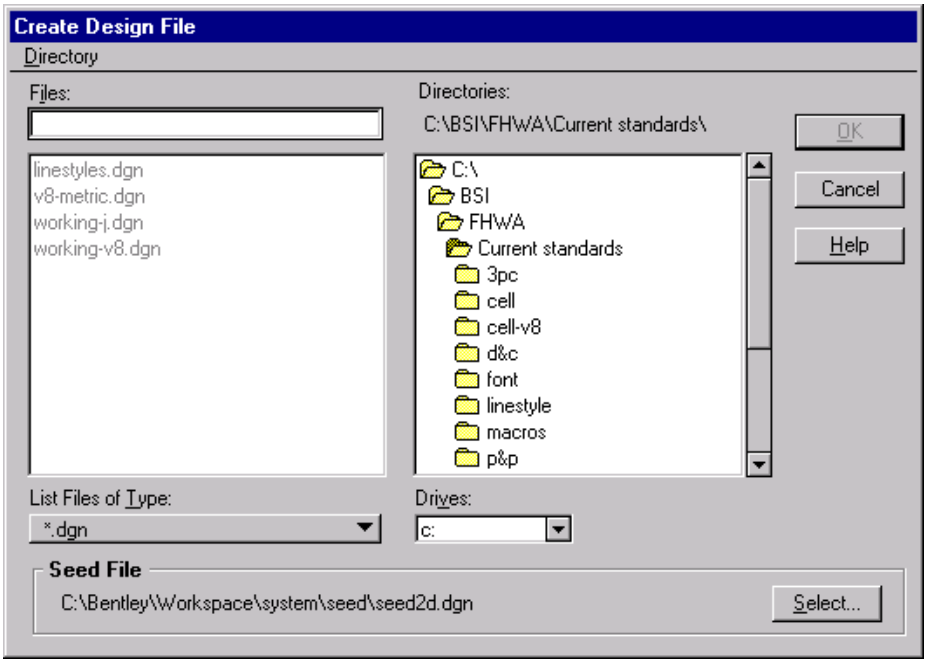

Figure 4-2: Workflow…

3. *Under the Seed File heading a file is already selected. This is the default Bentley seed file, which will be changed. Click on the Select button to choose the CFLHD seed file.*

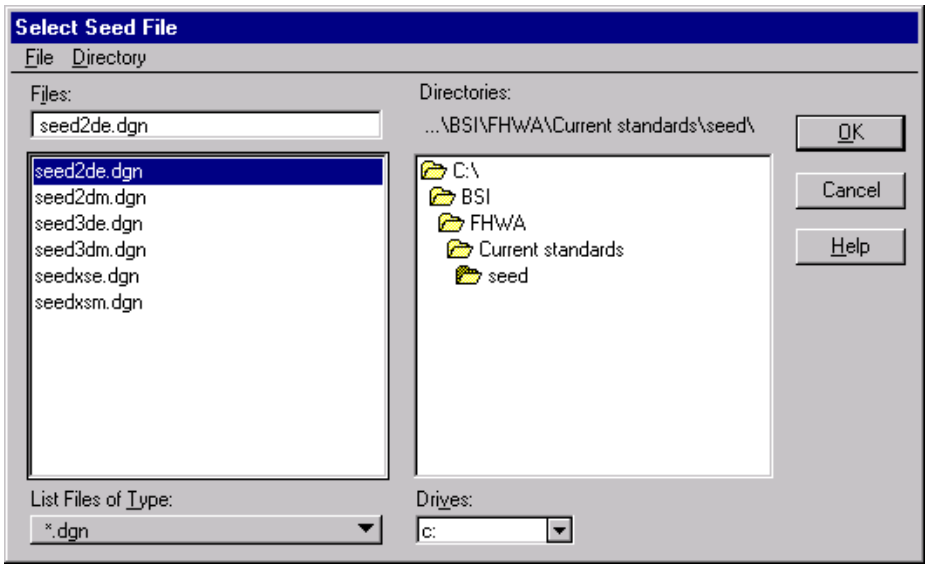

Figure 4-3: Workflow…

4. *Pick a path to the correct seed file, from the locations shown on page 1 of this chapter, using the directories portion of this dialog box.*
5. *Once the user has reached the correct directory the available seed files will display in the files section of the dialog box.*
6. *Select the correct seed file and click OK.*
7. *The correct seed file will now be shown. Give the new design file a name, make sure the path to where the file should be created is correct, then click OK.*

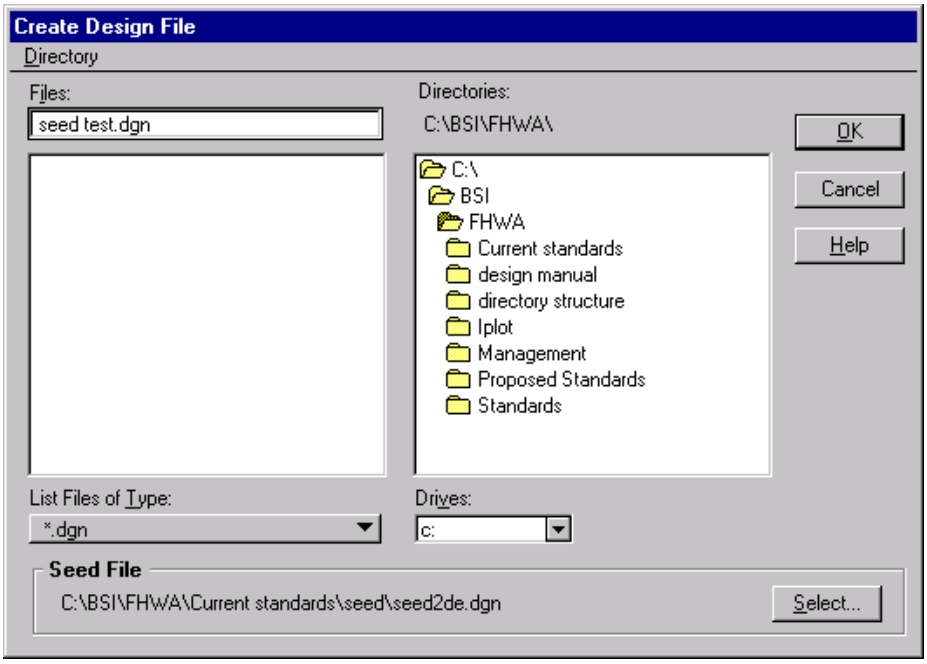

Figure 4-4: Workflow…

8. *See the above dialog box. Under the seed file section, the correct CFLHD seed file is displayed. In the directories box the example shows the path to where the user would like the file to be created, and in the files box, in the example a new file a name has been typed in.*

Coordinate Readout and Working Units

The MicroStation coordinate readout settings and working units settings control how measurements are displayed. In addition, the working units settings control the precision of measurements within the design file and the range of coordinates available within the design file. If all new design files are created using the CFLHD seed files as outlined in Workflow 1, then the coordinate readout and working units settings will always be correct. This section shows how to check these settings.

Working units settings control the resolution within a design file, and the resolution controls the precision with which elements are drawn and the working area of the design plane. Units within MicroStation are broken into Master Units (MU), Sub Units (SU), and Positional Units (PU). Resolution, or precision, of the design file is controlled by how many sub units there are per Master Unit, and how many Positional Units there are per sub unit. The more SU per MU and PU per SU there are will increase the accuracy of the design file, but decrease the overall size of the design plane.

This workflow shows how to determine what the MicroStation working units settings are for the active design file. The dialog box that displays the working units settings also allows the user to change those settings. **The user should never change any of the working units settings in the dialog box because this can cause irreparable damage to the design file**.

This workflow also shows how to change the MicroStation coordinate readout for the active design file. Changing the coordinate readout settings will not cause any damage to the design file.

Workflow 2: Accessing the working units and Coordinate Readout dialog

1. ***From MicroStation select*** *Settings>Design File.*

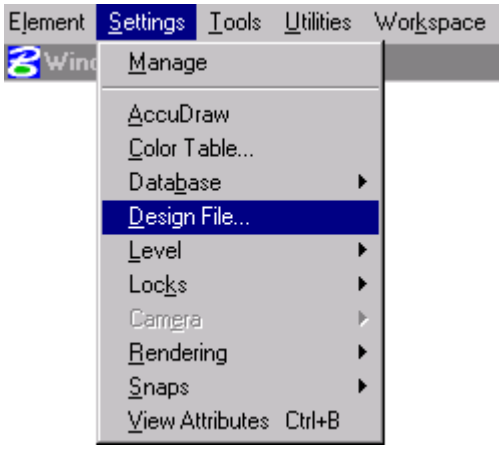

Figure 4-5: Settings

2. ***From the design file dialog box select*** *Coordinate Readout* ***or*** *Working Units****. Selecting these will display the following dialog boxes.***

The figures below show the different working units and coordinate readout settings contained within the CFLHD seed files. To access these dialog boxes use the preceding workflow.

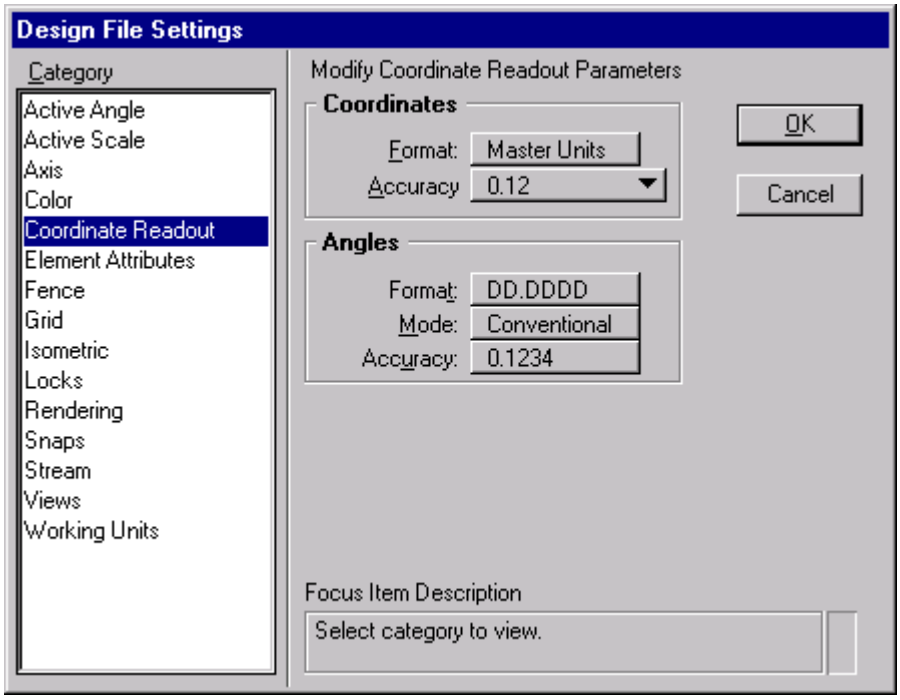

Figure 4-6: Coordinate readout for English roadway seed files

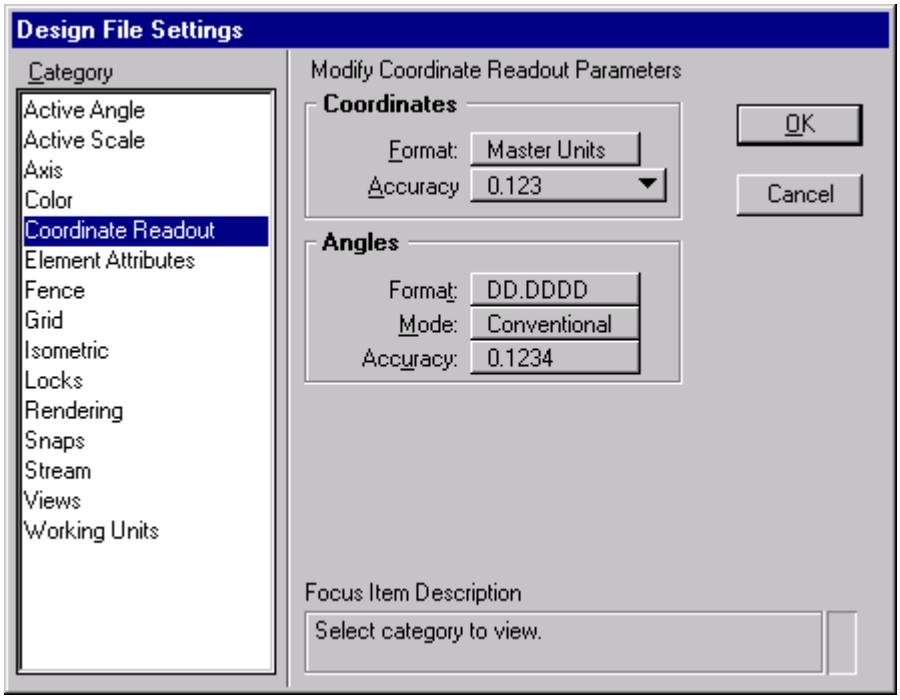

Figure 4-7: Coordinate readout for Metric roadway seed files

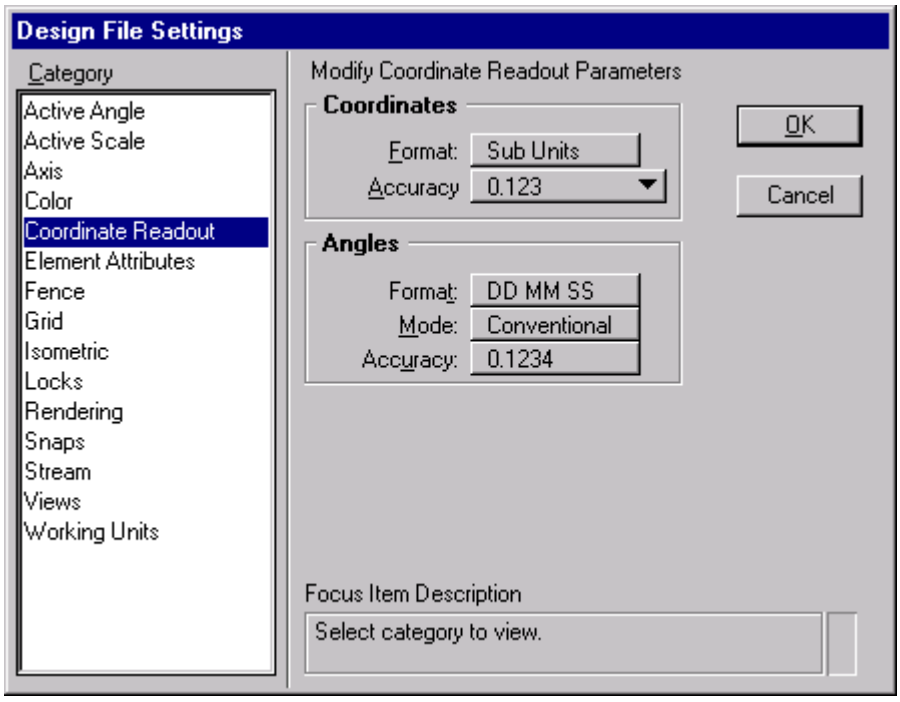

Figure 4-8: Coordinate readout for English bridge seed files

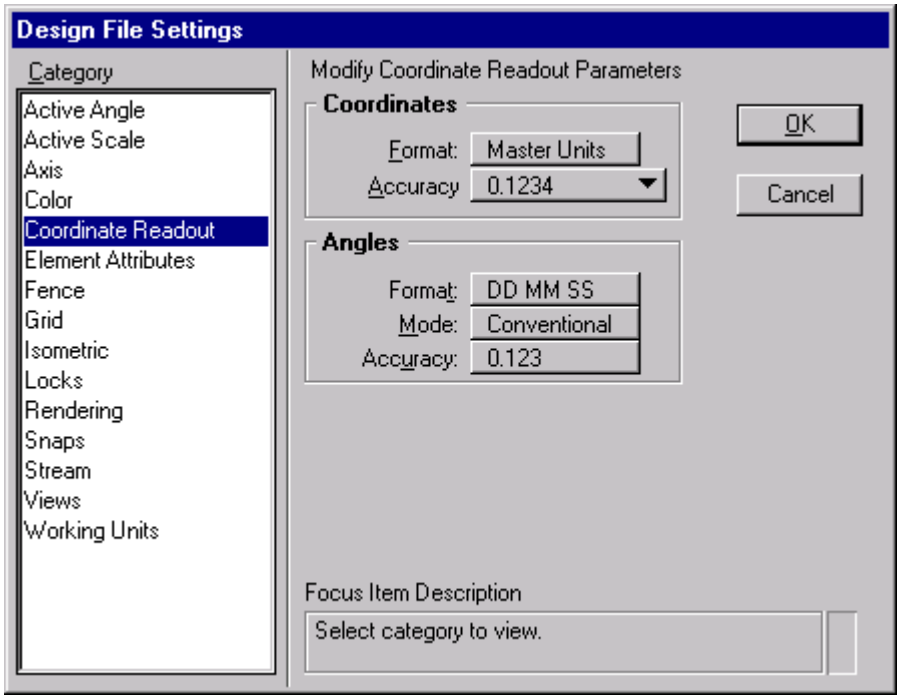

Figure 4-9: Coordinate readout for Metric bridge seed files

The coordinate readout section of the Design File Settings contains several settings including, format and accuracy for both coordinate readout and angles, and mode for coordinate readout. Format, for coordinates, lets the user select to display coordinate readout in terms of master units, sub units or working units. The generally accepted format, and the selection for FHWA is master units. For angles, format allows the user to display angles in decimal degrees or degrees-minutes-seconds. Accuracy, as used on the coordinate readout dialog, does not refer to the accuracy of the design file, but rather the number of decimal places to be displayed. The mode selection allows the user to select how angles are displayed: conventional, azimuth, or bearing.

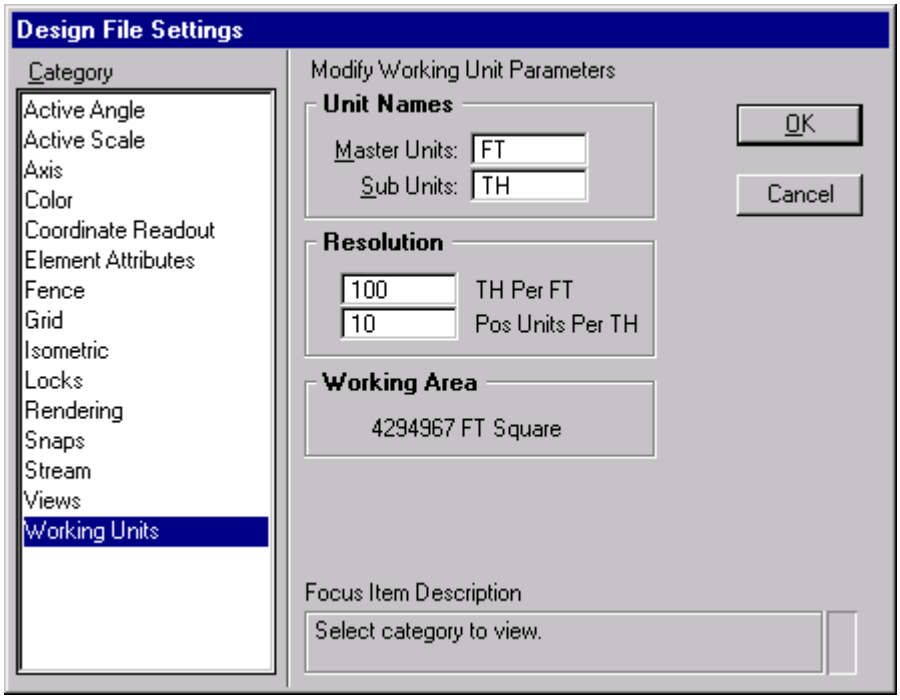

Figure 4-10: Working Units for English 2D seed file

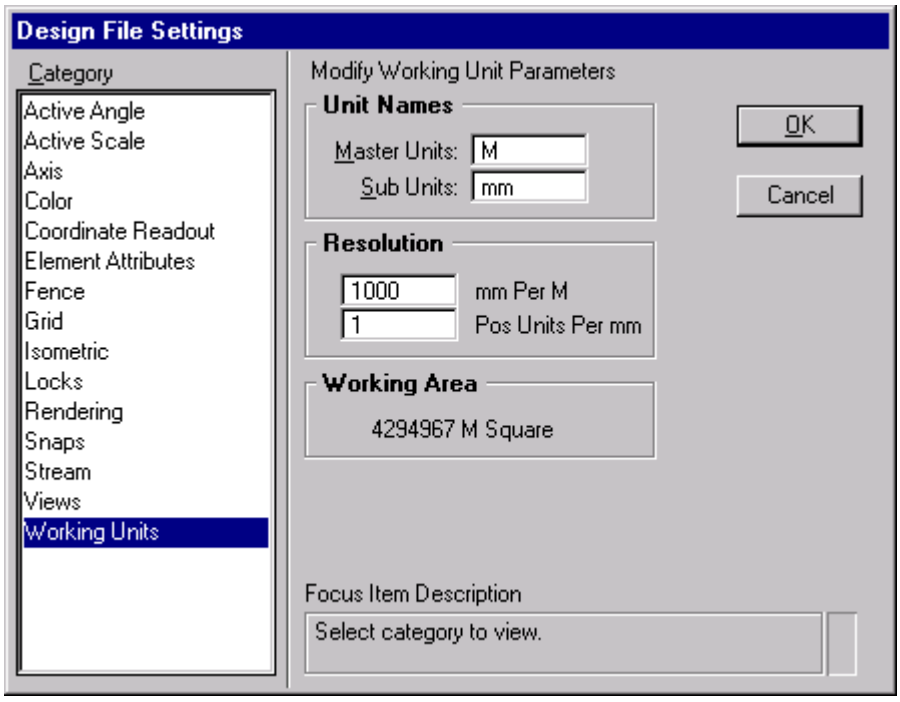

Figure 4-11: Working Units for Metric 2D seed file

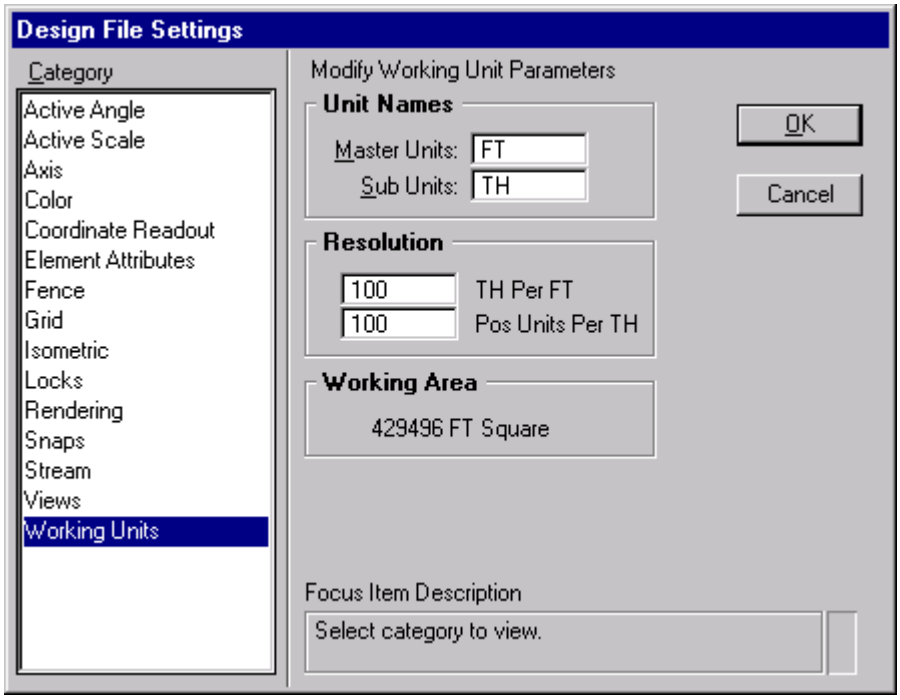

Figure 4-12: Working Units for English cross-section seed file

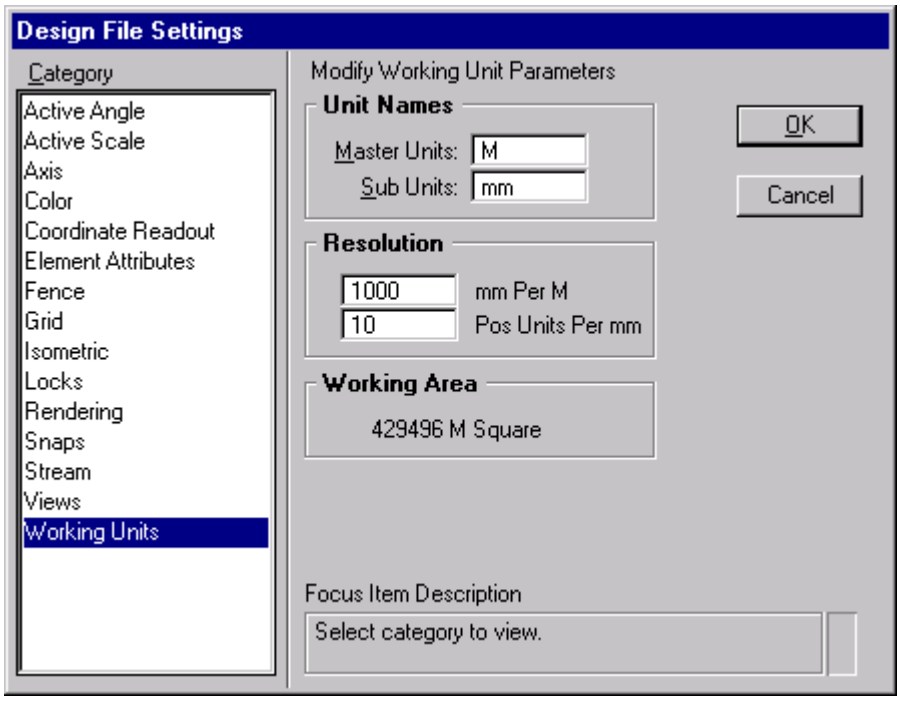

Figure 4-13: Working Units for Metric cross-section seed file

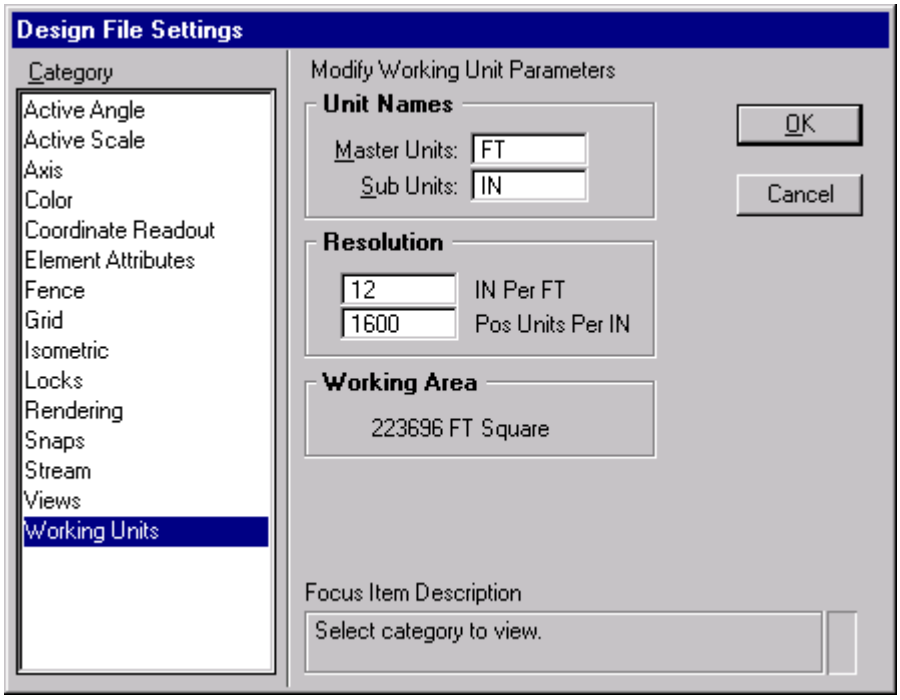

Figure 4-14: Coordinate readout for English bridge seed files

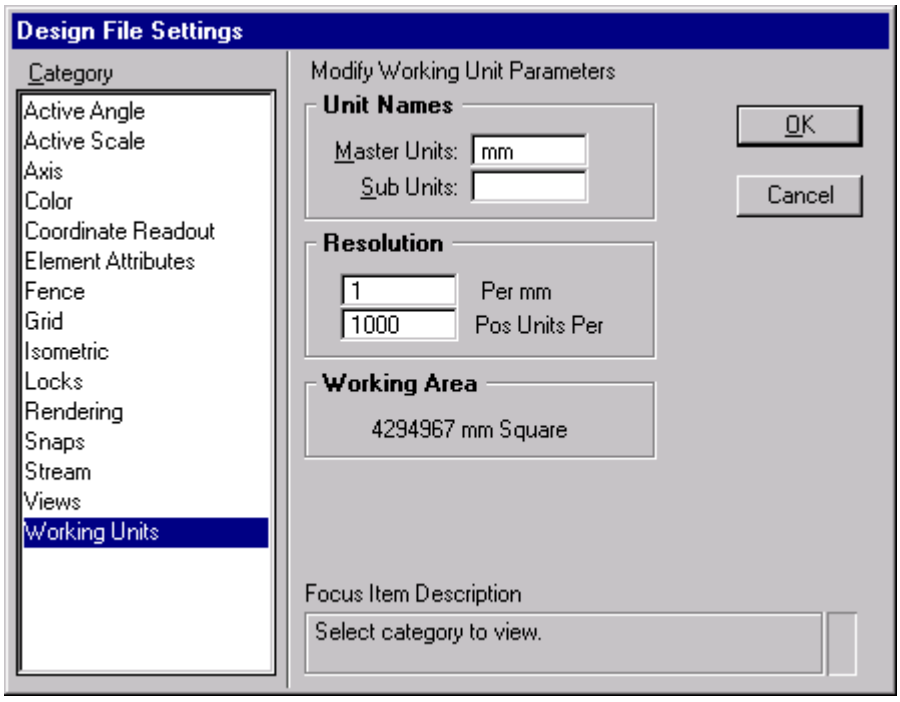

Figure 4-15: Coordinate readout for Metric bridge seed files

As discussed above, the greater the precision, the smaller the overall size of the working plane. The FHWA plan and profile seed files differ from the cross-section seed files in that the cross-section seed files do not require the amount of design plane space and may therefore have a higher degree of accuracy. In ***Figure 4-4***, Working units for Metric plan and profile, the precision is to a mm, or 1/1000th of a meter,

allowing for design plane area of 4,294,967 m x 4,294,967 m. In ***Figure 2-6***, Working units for Metric plan and profile, the precision is to a 10th of a mm, or 1/10000th of a meter, allowing for design plane area of 429,496 m x 429,496 m.